

# Database Lec 1

→ Difference between DBMS & File system?  
and who is better?  
advantage & Disadvantages of both of them.

→ Data {  
    → large  
    → shared  
    → persistent

DBMS → makes data shared.

→ reliability of data

← لو حدث (Failure) في ال (system) متجدد ال (data).

← من وسائل <sup>إ</sup> جعل ال (data) reliable تقوم بعمل (backup).

→ Privacy of data

← يوجد (Concerency Control) يقوم بعمل (oscillization) لل (data) وبذلك ~~منع~~ يمنع حاق البيانات.

(efficient) علاقة بين الخرج والدخل .

(effective) ← علاقة بال (Product)  
مع عين تقيم بال output فقط .

→ dictionary → describe the data base which is shared. (on DBMS)

DBMS → support storing of data with organized.

### Data models

\* Relational Model ' أشهرهم وهنالك عنه كثير

\* Hierarchical " .

\* Network " .

\* object " .

### Logical models

مع جدار لا يفهموا وانعمده

→ ال (data) مخزنة في ال (memory) على شكل  
مفرد وانعمده

## Physical models

← شکل ال (storage & data) و ال (memory)

## Logical models

→ organization of data from theoretical

## Conceptual models

← معنی ال (logical model)

و معنی بمستوی اعلیٰ ال (relations)

(Concepts of real world) ال (relations between data)

Schemas → invariant in time.

→ external schema is the same of logical model.

← فوجل المستخدم یری ال (data base) علی شکل (logical)

بحیث لا یری البیانات کامله.

→ Physical independence

انٹرس (user) قری ال (logical model) فقط .  
→ ای تغییر ال (Physical schema) لا تلا حظة .

→ Logical independence

→ لو عدلت ال (external schema) لا تتجّر ال (logical schema) .

→ relation between external schema & logical schema.